

Amendments to the Claims:

The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

1. – 32. (Cancelled)

33. (Currently amended) The method of claim ~~60[32]~~, further comprising modifying the pacing interval to aid in detecting whether an autonomous intrinsic signal component is present within the heart.

34. (Previously presented) The method of claim 33, wherein modifying the pacing interval includes modulating an atrial to ventricular pacing delay.

35. (Currently amended) The method of claim ~~60[32]~~, wherein the subsequently delivered pacing pulse comprises a pacing pulse delivered to a ventricle of the heart after the delivered pacing pulse.

36. (Currently amended) The method of claim ~~60[32]~~, wherein detecting whether an autonomous intrinsic signal component is present within the heart comprises comparing a past ventricular signal resulting from a past pacing pulse with the ventricular signal resulting from the delivered pacing pulse.

37. (Previously presented) The method of claim 36, wherein a past ventricular signal comprises a past ventricular signal that is representative of a ventricular signal where the heart is fully captured by the past pacing pulse.

38. (Previously presented) The method of claim 36, wherein a past ventricular signal further comprises a most recent ventricular signal resulting from a most recent pacing pulse.

39. (Previously presented) The method of claim 37, wherein comparing a past ventricular signal resulting from a past pacing pulse with the ventricular signal resulting from the delivered pacing pulse comprises comparing at least

one morphological characteristic of the past ventricular signal to a same morphological characteristic of the ventricular signal resulting from the delivered pacing pulse.

40. (Previously presented) The method of claim 39, wherein the morphological characteristic includes at least one of a minimum amplitude of a signal, a maximum amplitude of a signal, a width of a signal, a slope of a signal, T-wave timing and T-wave amplitude.

41. (Currently amended) A device comprising:

at least one electrode to deliver a ventricular pacing pulse to a heart and sense a ventricular signal ~~resulting from response to the delivered pacing pulse;~~
and

a processor that detects whether an autonomous intrinsic signal component is present within the sensed ventricular ~~signal response~~ within the heart after delivering the ventricular pacing pulse and extends a pacing interval between the delivered pacing pulse and a subsequently scheduled pacing pulse if the autonomous intrinsic signal component is detected.

wherein detecting whether an autonomous intrinsic signal component is present comprises: comparing a morphological characteristic of a past ventricular signal response to a past pacing pulse known to fully capture the heart to the same morphological characteristic of the sensed ventricular signal response to the delivered pacing pulse;

determining if the same morphological characteristic of the ventricular signal response to the delivered pacing pulse deviates enough from the morphological characteristic of the past ventricular signal to exceed a threshold;
and

determining the ventricular signal response to the delivered pacing pulse originates from both autonomous intrinsic ventricular activity in response to the threshold being exceeded..

42. (Previously presented) The device of claim 41, wherein the processor modifies the pacing interval to aid in detecting whether an autonomous intrinsic signal component is present within the heart.

43. (Previously presented) The device of claim 42, wherein the processor modifies the pacing interval by modulation of atrial to ventricular delay.

44. (Previously presented) The device of claim 42, wherein the electrode comprises an electrode to deliver a pacing pulse to a ventricle of the heart.

45. (Previously presented) The device of claim 41, wherein the processor detects whether an autonomous intrinsic signal component is present by comparing a past ventricular signal resulting from a past pacing pulse with the ventricular signal resulting from the delivered pacing pulse.

46. (Previously presented) The device of claim 45, wherein the processor that compares a past ventricular signal that is representative of a ventricular signal where the heart is fully captured by the past pacing pulse.

47. (Previously presented) The device of claim 45, wherein the processor compares a most recent ventricular signal resulting from a most recent pacing pulse.

48. (Previously presented) The device of claim 45, wherein the processor compares at least one morphological characteristic of the past ventricular signal to a same morphological characteristic of the ventricular signal resulting from the delivered pacing pulse.

49. (Previously presented) The device of claim 48, wherein the processor compares at least one of a minimum amplitude of a signal, a maximum amplitude

of a signal, a width of a signal, a slope of a signal, T-wave timing and T-wave amplitude.

50. (Previously presented) The device of claim 45, further comprising a memory to store the past ventricular signal.

51. (Currently amended) A computer-readable medium comprising instructions to cause a processor to:

- control a pulse generator to deliver a ventricular pacing pulse to a heart;
- sense a ventricular signal ~~resulting from response to~~ the delivered ventricular pacing pulse;
- detect whether an autonomous intrinsic signal component is present within the sensed ventricular signal response within the heart after delivering the pacing pulse; and

- extend a pacing interval between the delivered pacing pulse and a subsequently scheduled pacing pulse if the autonomous intrinsic signal component is detected

- wherein detecting whether an autonomous intrinsic signal component is present comprises: comparing a morphological characteristic of a past ventricular signal response to a past pacing pulse known to fully capture the heart to the same morphological characteristic of the sensed ventricular signal response to the delivered pacing pulse;

- determining if the same morphological characteristic of the ventricular signal response to the delivered pacing pulse deviates enough from the morphological characteristic of the past ventricular signal to exceed a threshold;
and

- determining the ventricular signal response to the delivered pacing pulse originates from both autonomous intrinsic ventricular activity in response to the threshold being exceeded..

52. (Previously presented) The computer-readable medium of claim 51, further comprising instructions to cause the processor to modify the pacing

interval to aid in detecting whether an autonomous intrinsic signal component is present within the heart.

53. (Previously presented) The computer-readable medium of claim 52, wherein the instructions cause the processor to modify the pacing interval by modulation of atrial to ventricular delay.

54. (Previously presented) The computer-readable medium of claim 51, wherein the subsequently delivered pacing pulse comprises a pacing pulse delivered to a ventricle of the heart after the delivered pacing pulse.

55. (Previously presented) The computer-readable medium of claim 51, wherein the instructions cause the processor to detect whether an autonomous intrinsic signal component is present within the heart by comparing a past ventricular signal resulting from a past pacing pulse with the ventricular signal resulting from the delivered pacing pulse.

56. (Previously presented) The computer-readable medium of claim 55, wherein a past ventricular signal comprises a past ventricular signal that is representative of a ventricular signal where the heart is fully captured by the past pacing pulse.

57. (Previously presented) The computer-readable medium of claim 55, wherein the past ventricular signal further comprises a most recent ventricular signal resulting from a most recent pacing pulse.

58. (Previously presented) The computer-readable medium of claim 57, wherein the instructions cause the processor to compare the past ventricular signal resulting from the past pacing pulse with the ventricular signal resulting from the delivered pacing pulse by comparing at least one morphological

characteristic of the past ventricular signal to a same morphological characteristic of the ventricular signal resulting from the delivered pacing pulse.

59. (Previously presented) The computer-readable medium of claim 58, wherein a morphological characteristic includes a minimum amplitude of a signal, a maximum amplitude of a signal, a width of a signal, a slope of a signal, T-wave timing and T-wave amplitude.

60. (Previously presented) A method comprising:
delivering a ventricular pacing pulse to a heart;
sensing a ventricular signal response to the delivered pacing pulse;
detecting whether an autonomous intrinsic signal component is present within the sensed ventricular signal response to the delivered pacing pulse; and
extending a pacing interval between the delivered ventricular pacing pulse and a subsequently scheduled ventricular pacing pulse if the autonomous intrinsic signal component is detected;
wherein detecting whether an autonomous intrinsic signal component is present comprises: comparing a morphological characteristic of a past ventricular signal response to a past pacing pulse known to fully capture the heart to the same morphological characteristic of the sensed ventricular signal response to the delivered pacing pulse;
determining if the same morphological characteristic of the ventricular signal response to the delivered pacing pulse deviates enough from the morphological characteristic of the past ventricular signal to exceed a threshold;
and
determining the ventricular signal response to the delivered pacing pulse originates from both autonomous intrinsic ventricular activity in response to the threshold being exceeded.